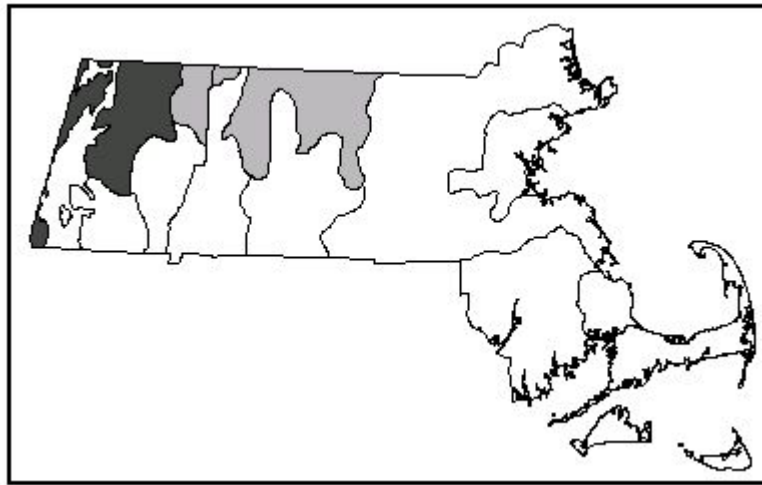


Community Name: SPRUCE - FIR BOREAL SWAMP
Community ELCODE: CP1A110000
SRANK: S3



- Concept:** Forested wetlands of Berkshire Highlands and north-central Massachusetts dominated by red spruce and balsam fir.
- Environmental setting:** Spruce-fir swamps are typically found at stream headwaters or in poorly drained basins in the mountainous, northwestern part of the state. They develop in cold, poorly drained areas, typically on acidic glacial till. Elevation ranges from 1500-2000 ft. in the Berkshire Highlands [Weatherbee 1996]. Organic muck or peat soils are seasonally saturated. More work is needed to describe the physical setting and soil profiles of boreal swamps.
- Vegetation Description:** Red spruce (*Picea rubens*) and balsam fir (*Abies balsamea*) are dominant in the overstory. Other canopy associates are white pine (*Pinus strobus*), black cherry (*Prunus serotina*), tamarack (*Larix laricina*), black spruce (*Picea mariana*), paper birch (*Betula papyrifera*), hemlock (*Tsuga canadensis*), yellow birch (*Betula alleghaniensis*), and red maple (*Acer rubrum*). Unlike spruce-tamarack forested bogs, spruce-fir boreal swamps have red spruce rather than black spruce co-dominant in the canopy, and they typically lack bog indicator species like Labrador tea (*Ledum groenlandicum*) and bog laurel (*Kalmia polifolia*). The following three shrubs almost always occur in boreal swamps: mountain holly (*Nemopanthus mucronatus*), sheep laurel (*Kalmia angustifolia*), and wild raisin (*Viburnum nudum* var. *cassinoides*). Other shrubs include American mountain-ash (*Sorbus americana*), hobble-bush (*Viburnum lantanoides*), and mountain maple (*Acer spicatum*). Typical herbaceous species are northern awned sedge (*Carex gynandra*), New England sedge (*Carex novae-angliae*), goldthread (*Coptis trifolia* ssp. *groenlandica*), creeping snowberry (*Gaultheria hispida*), bluebead-lily (*Clintonia borealis*), one-sided pyrola (*Orthilia secunda*), bishop's cap (*Mitella diphylla*), lesser mitrewort (*Mitella nuda*), mountain wood-sorrel (*Oxalis montana*), royal fern (*Osmunda regalis*), and pale St. John's-wort (*Hypericum ellipticum*). The ground is often a carpet of mosses, including Sphagnum; more information is needed on the characteristic moss species. Richer variants of the community can occur in areas of calcareous groundwater seepage, but more information is needed.
- Associations:** Putnam(2001) described three variants: Red Spruce dominated, Mixed Canopy variant, and Balsam Fir variant.
- Habitat values for Associated Fauna:** Spruce-fir boreal swamps can function as vernal pool habitat if water remains standing for 2-3 months and they lack fish; these areas provide important amphibian breeding habitat.

Associated rare plants:

AMELANCHIER BARTRAMIANA	BARTRAM'S SHADBUSH	T
ARCEUTHOBIUM PUSILLUM	DWARF MISTLETOE	SC
LINNAEA BOREALIS	TWINFLOWER	- WL
RIBES TRISTE	SWAMP RED CURRANT	- WL

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Associated rare animals:

PIERIS NAPI OLERACEA

MUSTARD WHITE

SC

**Examples with
Public Access:**

Peru WMA, Peru; Hinsdale WMA, Hinsdale; Ashburnham State Forest, Ashburnham.
Sandisfield State Forest, Sandisfield.

Threats:

Changes in hydrology and nutrient status, logging, development, and exotic species are the greatest threats to Spruce-Fir Boreal Swamps.

Management needs:

Removal of exotic invasives where they are established. The use of undisturbed natural buffers around the best occurrences of the community reduces the potential for impacts from changes in the surrounding environment.

Synonyms

USNVC/TNC:

Picea mariana/Kalmia angustifolia/Sphagnum spp. Forest [CEGL006168]; Picea rubens-Abies balsamea/Gaultheria hispidula/Sphagnum spp. spruce swamp of northern Appalachians [CEGL006312]; Picea rubens-Abies balsamea/Sphagnum magellanicum forest [CEGL006311]; calcareous variants correspond to Fraxinus nigra-Acer rubrum/Nemopanthus mucronatus-Vaccinium corymbosum forest [CEGL006220].

MA [old name]:

NNE Acidic Seepage Swamp [CP3B2B0000].

ME:

Spruce-fir swamp community.

VT:

Spruce-fir-tamarack swamp.

NH:

Coniferous basin swamp.

NY:

Spruce-fir swamp.

CT:

Picea rubens/Nemopanthus mucronatus community.

RI:

Not described.

Golet & Larson, 1974:

Evergreen wooded swamp [WS-2].

Other:

Acidic conifer swamp community [Weatherbee 1996].
Spruce-Fir Boreal Swamp. [Putnam 2001].

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P. Swain edits 6/22/04

Date:

7/21/99